

# **Final Research Report**

## **Idaho Recreational Vehicle Use in 2003: Snowmobiles, ATVs, and Motorized Watercraft**

*FOR*

**Idaho Department of Parks and Recreation**

*AND*

**Idaho Transportation Department**

*PREPARED BY*

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## Technical Note on Statistical Significance

**Statistical significance (inference) tests.** The findings in this report may be analyzed using tests for statistical significance. The most commonly applied statistical tests of significance are the Chi-square ( $\chi^2$ ), the t-test, and the analysis of variance (ANOVA) or F-test.

**Testing relationships – testing differences.** Generally, a test of statistical significance tells whether there is a reliable relationship between two or more variables. For example, a test of the correlation between children's age and their shoe size is likely to be *positive and significant*, because *as children age, their shoe size increases*. Often, a relationship is described in terms of a difference between two groups. For example, *the average shoe size of children is significantly smaller than that of adults*.

**The  $p$ -value – smaller is better.** When a significance test is reported, its significance level is also reported as a  $p$ -value, for example,  $p < .05$  (read as " $p$  less than point-oh-five"). This  $p$ -value is the probability that you could be wrong in concluding that there is a significant relationship. In the case of  $p < .05$ , you could be wrong 5 times in 100, or 1 time in 20 by concluding that there is a real relationship (or difference), based in the specific, observed findings. If the  $p$ -value is very small, for example,  $p < .001$ , then the test is considered "highly significant" because it means that only 1 time in 1000 would you be wrong in concluding that there is a real relationship, based on the specific, observed findings.

**The  $p$ -value – .05 is the "standard maximum" but .10 may be informative.** In biological and social scientific disciplines, the largest  $p$ -value considered "statistically significant" is  $p < .05$ . However, this is a somewhat arbitrary cut-off. In many practical applications, a  $p$ -value of .10 or even greater may be sufficient to guide important decisions, especially if the costs of ignoring a good opportunity are very high.

**Three factors affect  $p$ -values.** In all cases, the factors that affect whether a test shows statistical significance are three:

- The size of the relationship between two variables (or the size of the difference). The bigger the difference, the smaller the  $p$ -value, and the greater the statistical significance.
- The amount that people differ from one another, normally, on the particular dimension. The more people vary naturally, the larger the  $p$ -value, and the lower the statistical significance.
- The number of respondents. The more respondents there are, the smaller the  $p$ -value, and the greater the statistical significance.

## **Executive Summary**

This report summarizes the findings from three season-long assessments of the recreational use of Idaho registered owners. The study, conducted on behalf of the Idaho Department of Parks and Recreation (IDPR) and the Idaho Transportation Department (ITD), examined the recreational use of snowmobiles, ATVs, and motorized watercraft in the state of Idaho.

Participating in the studies were 660 registered snowmobile owners, 994 registered ATV owners, and 1,442 registered watercraft owners. The ATV study was done in seven, 4-week segments, from May through November, 2003, with a two-week hiatus in late September. The snowmobile study was conducted in five, 4-week segments mid-November, 2002 through mid-April, 2003. The watercraft study was done in six, 4-week segments, beginning in January, 2003, and then continuing from May through September, 2003. In each study segment, participants reported on vehicle use during the 4-week segment, and about their off-season use.

Each aspect of the research was designed to gain high levels of participation from owners, and to gather highly reliable use statistics. Owners, randomly selected for the study, were contacted at least twice, first by postcard and then by first-class mail, to introduce them to the study and to stress the importance of participation. As a matter of convenience to them, they were offered a choice of telephone or Internet survey participation. All eligible owners were later contacted by phone or by email to encourage participation. Finally, we provided the selected owners in each of the 4-week study segments with brief diaries to record details of their recreational vehicle use.

Together, the studies reached the following conclusions about these three groups of recreational vehicles:

### **Snowmobiles**

- Of all recreational vehicle owners, these are the youngest; 49.2% are between ages 35-49
- Least number of vehicle registrations (33,114)
- Mid-level fuel consumption per vehicle (56.5 gallons per year)
- Lowest annual fuel consumption per recreational vehicle user group (1.9 million gallons)
- Highest overall satisfaction with IDPR services to users, averaging “somewhat satisfied.”  
Equal in satisfaction with watercraft owners
- Least support (57.3%) for a minimum age requirement for target recreational vehicle operation (snowmobiles)
- Among minimum age supporters, youngest minimum age favored; 47.7% supported ages between 8 and 13 years
- Highest average number of recreational vehicles in household (combined 5.8 snowmobiles, ATVs, and motorized watercraft)
- Most owners (84.3%) have other types of motorized recreational vehicles in household

### **ATVs**

- Mid-level number of vehicle registrations (69,765)
- Lowest fuel consumption per vehicle (33.7 gallons per year)
- Second lowest (after snowmobiles) annual fuel consumption per recreational vehicle user group (2.4 million gallons)
- Owners least satisfied overall with IDPR services to users; overall satisfaction averages between “somewhat satisfied” and “neither satisfied nor dissatisfied”
- Mid-level support (72.7%) for a minimum age requirement for target recreational vehicle operation (ATVs)
- Among minimum age supports, 57.7% favor minimum ages between 14 and 17 years
- Mid-level average number of recreational vehicles in household (combined 3.7 snowmobiles, ATVs, and motorized watercraft)

### **Motorized Watercraft**

- Of all recreational vehicle owners, these are the oldest; 41.8% are between ages 50-64
- Most vehicle registrations (78,593)
- Highest fuel consumption per registration (86.6 gallons per year)
- Highest annual fuel consumption per recreational vehicle user group (6.8 million gallons)
- Highest overall satisfaction with IDPR services to users, averaging “somewhat satisfied.” Equal in satisfaction with snowmobile owners
- Most support (92.4%) for a minimum age requirement for target recreational vehicle operation (motorized watercraft)
- Among minimum age supporters, oldest minimum age favored; 75.1% supported ages between 14 and 17 years
- Lowest average number of recreational vehicles in household (combined 2.7 snowmobiles, ATVs, and motorized watercraft)
- A majority (53.5%) have no other types of motorized recreational vehicles in household

### **Additional Findings and Conclusions**

- Over 90% of respondents in studies were male
- Frequency of use during the study was similar across vehicles- an average 0.8 to 0.9 weeks of use during the 4-week diary period
- Frequency of use during the study by those who rode or boated was similar across vehicle types – an average 2.1 – 2.3 weeks of use during the 4-week diary period
- Registrants who can be considered “enthusiasts” (used their recreational vehicle in at least 2 weeks of the 4-week diary period) was similar across vehicle types, representing 24.4% to 25.3% of registrants
- Highest overall satisfaction with IDPR services to users was found among registrants in the North Central IDPR Planning District, and among Washington State residents who own watercraft registered in the Idaho
- The Internet was the most preferred medium by which IDPR could communicate information about trails and boat ramp conditions. Newspaper was the second most preferred medium for communication.

## Introduction

Three studies assessed Idaho recreational vehicle use, including fuel use, user preferences and certain tourism-related beliefs of vehicle users served by the Idaho Department of Parks and Recreation. The three types of motorized recreational vehicles use were tracked were (1) snowmobiles, (2) motorized watercraft, and (3) off-road land vehicles including all-terrain-vehicles (3-wheelers and 4-wheelers) and off-road motorcycles, jointly referred to as ATVs.

Complete descriptions of the research background, methodology, and findings from each of these studies can be found in the individual recreational vehicle reports:

- *Idaho Recreational Snowmobile Use and Fuel Consumption in the 2003 Season*
- *Idaho Recreational ATV Use and Fuel Consumption in the 2003 Season*
- *Idaho Recreational Watercraft Use and Fuel Consumption in the 2003 Season.*

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## Method

The three studies used a modified telephone-plus-online method to gauge fuel use, user preferences, and certain tourism-related beliefs of Idaho's recreational vehicle users served by the Idaho Department of Parks and Recreation (IDPR). The design combined the most effective features of mail-out methods with the control, efficiency, and cooperation-enhancing features of telephone and online surveying. The basic methodology was similar across the three concurrent IDPR studies of snowmobiles, motorized watercraft, and ATVs to enhance comparisons across vehicle types, and assess cross-vehicle-type relationships.

Complete methodologies can be found in each of the individual recreational vehicle reports, *Idaho Recreational Snowmobile Use and Fuel Consumption in the 2003 Season*; *Idaho Recreational ATV Use and Fuel Consumption in the 2003 Season*; and *Idaho Recreational Watercraft Use and Fuel Consumption in the 2003 Season*.

### Vehicle Use Study Data Collection Procedures

For each of the three separate studies, Strategic Intelligence randomly selected a sample of privately owned recreational vehicles (snowmobile, ATV, or motorized watercraft) from the Idaho Department of Parks and Recreation vehicle registration database. We then contacted most sampled vehicle owners at least three times, unless they indicated via return postcard that they were not qualified or did not wish to participate. In that case, we made no further contacts after the second one, which provided them the reply postcard.

1. In the first contact, we sent a postcard to the owner, notifying her or him of the upcoming study, and requesting participation.
2. Two to four days later, we sent survey materials via first-class mail to the owners, explaining the study and asking them to keep a log of their recreational vehicle use for the coming **four weeks**, using the paper trip log provided on the back of the introduction/ instruction letter. We also included a stamped, return-addressed post-card, which allowed owners to indicate whether and how they wished to participate in the study, or whether they were no longer qualified for the study because they no longer owned the machine, or for other reasons (explained later in detail).
3. Four weeks later, at the end of a group's trip-logging period, we began data collection<sup>1</sup>. For respondents who wanted to complete the survey online, we sent them an email reminder of the survey's Web address. For those who preferred to participate by phone, or who did not express a preference, we<sup>2</sup> made phone calls to conduct the survey with them by phone. Data collection for each 4-week, trip-log cycle typically lasted two to three weeks. For several of the samples, we sent reminder postcards during the data collection phase to encourage respondents to participate either online or by phone.

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<sup>1</sup> Respondents who reported their answers using the online survey were encouraged to log on weekly, as they completed each week's riding. They were also contacted at the end of the trip-log period by email with a reminder to complete the final trip log and the remaining part of the survey.

<sup>2</sup> Our telephone data collection partner, Itracks, conducted the telephone surveys on our behalf.

## ***Data Collection Periods***

**Snowmobile Data Collection.** There were five, 4-week trip-log periods during which snowmobilers kept track of their riding, and reported their snowmobile use and other data. The twenty-weeks spanned from mid-November, 2002 through mid-April 2003.

**ATV Data Collection.** There were seven, 4-week trip-log periods during which ATV owners kept track of their riding, and reported their ATV use and other data. The twenty-eight weeks spanned from May through November, 2003 (The study span included a two-week hiatus in late September-early October).

**Watercraft Data Collection.** There were six, 4-week trip-log periods during which watercraft owners kept track of their boating, and reported their watercraft use and other data. The 28 weeks included four weeks in January, 2003 and the twenty-week span from May to September, 2003.

## ***Mailed Postcard Alert & Introduction***

About one week before the beginning of each trip-log period, we mailed a postcard to all registrants selected for participation in that period. The postcard briefly explained the study, and alerted recipients to look for the full explanation that would follow a few days later by mail.

## ***Mailed Letter of Introduction and Instruction***

An introductory letter was mailed to all registrants selected for participation in the survey. The letter was mailed in the week prior to the first Saturday of the 4-week trip-log period. The letter:

- Explained the survey, indicated when and by whom respondents would be phoned for the survey, or how they could participate online. The mailing contained a postcard for immediate return mail, and a simple trip log sheet for recording their recreational vehicle use for the 4-week trip-log period that would begin that Saturday.
- Asked respondents to return the enclosed postcard immediately. The return postcard, in part, allowed recipients to indicate status that would disqualify them from participation in the survey. Recipients were excluded from further contact and participation in the survey if (1) they no longer owned the recreational vehicle in question, (2) the ATV was used exclusively for commercial purposes, (3) the respondent was under age 18, or (4) the respondent was currently participating in the study. In addition, recipients could indicate that they had no wish to participate in the study. They could also indicate that they would not be riding during the survey period, although recipients were encouraged to participate in the full survey even if they were not going to use their vehicle during the survey period.
- Asked respondents to use the enclosed, simple log sheet for the following 4-week period to keep track of their recreational vehicle use.
- Asked respondents to update their telephone contact information, and to provide email contact information (see Appendix A for an example of the mailed ATV materials).
- Asked respondents to respond to the phone survey when they would be contacted about four weeks from then.
- Informed respondents that they could complete the survey online instead of by phone, and gave them a Web address for more information.
- Identified the client agency, Idaho Department of Parks and Recreation.



- Referred recipients to the IDPR Web page for further information and facts.
- Identified the specific ATV they would report on (to avoid respondents reporting only on their most-used, or most recently purchased, or least-used machine).
- Explained the benefits of participating in the survey.

### ***Telephone and Email Contacts Initiated Data Collection***

At the end of the 4-week trip-log period, eligible registrants who returned postcards and indicated a preference for participating in a telephone interview were contacted by phone. Those who indicated a preference for the online survey were sent emails reminding them that they could log on to the survey Website. In addition, those who had not returned a postcard were also contacted by phone and asked to participate in the survey. A minimum of ten telephone contact attempts were made to each potential participant before abandoning the record.

### ***Study Response Rates***

The participation rates were very good across the three studies. In the snowmobile, ATV, and watercraft studies, 59.5%, 71.7%, and 68.1% of selected registrants that were not specifically disqualified (no commercial use, does not own the vehicle, post office unable to deliver survey, etc.) completed the study by reporting on their recreational vehicle use. Of selected registrants who received the initial surveys and who were later successfully contacted by phone or email, 89.6%, 93.3%, and 89.1 reported on their vehicle use.

**Table 1: Participation and Outcomes of Survey Mailings**

<b>Outcomes of Survey Mailings</b>			
	Snowmobile	ATV	Watercraft
Complete Survey	660	994	1,442
Incomplete survey	6	7	11
Refusal	71	64	165
DQ-Under Age 18	3	12	0
DQ-Does not own vehicle	80	54	113
DQ-No recreational use	16	54	7
DQ-Participant in another study	8	10	7
Deceased	0	1	4
DQ-No reason stated	2	31	35
NIS/Wrong number	148	144	288
NA/Busy	192	125	151
No Telephone Contact Attempt	33	52	49
Total Survey Recipients	1,219	1,548	2,272
Undeliverable by Post Office	52	52	78
Surveys Mailed	1,271	1,600	2,350

Survey participants were given a choice between a telephone survey and an online survey. In all three studies, a strong majority chose to complete their survey by telephone<sup>3</sup>.

**Table 2: Outcomes of Survey Mailings**

Type of Complete	Snowmobile	ATV	Watercraft
Telephone Survey Completed	75.2%	81.9%	77.7%
Online Survey Completed	14.2%	6.8%	9.4%
Postcard (no vehicle use)	10.6%	11.3%	12.9%
Number of completes	660	994	1,442

## ***Respondent Demographics***

In the three studies, the survey respondents were overwhelmingly male (See Table 3).

**Table 3: Gender of Respondents**

Type of Complete	Snowmobile	ATV	Watercraft
Men	92.1%	91.3%	91.3%
Women	7.9%	8.7%	8.7%
Number of respondents	582	881	1,246

A plurality of snowmobile and ATV owners was between the ages of 35 to 49. In contrast, a plurality of watercraft owners was between the ages of 50 to 64.

**Table 4: Gender of Respondents**

Type of Complete	Snowmobile	ATV	Watercraft
18 to 34 years	15.3%	14.9%	7.2%
35 to 49	49.2%	41.8%	35.7%
50 to 64	29.5%	31.1%	41.8%
65 to 79	5.6%	11.4%	13.7%
80+ years	0.3%	0.7%	1.6%
Number of Respondents	589	851	1,179

<sup>3</sup> In contrast, as seen later in this report, a plurality of respondents in all three studies preferred the Internet as a source of information about trailhead and boat ramp conditions.

## Findings

Complete findings can be found in each of the individual recreational vehicle reports, *Idaho Recreational Snowmobile Use and Fuel Consumption in the 2003 Season*; *Idaho Recreational ATV Use and Fuel Consumption in the 2003 Season*; and *Idaho Recreational Watercraft Use and Fuel Consumption in the 2003 Season*.

### ***Recreational Vehicle Fuel Consumption***

The three studies recreational vehicle studies found overall annual fuel consumption for snowmobiles, ATVs, and motorized watercraft of 1.6 million, 1.9 million, and 6.8 million gallons, respectively. Motorized watercraft had both the highest annual fuel consumption per vehicle, and the highest number of registrants. See Table 5 below.

**Table 5: Annual Fuel Use per Vehicle**

	Snowmobile	ATV	Watercraft
Annual gallons per vehicle	56.5	33.7	86.6
Confidence level among users	± 12%	± 13%	± 18%
Number of registrants	33,114	69,765	78,593
Total annual gallons	1,871,855	2,352,032	6,804,120

### ***Recreational Vehicle Seasonal Use***

The study periods for each of the three recreational vehicle studies were selected to capture the times of year when users would be most likely to use their vehicles (snowmobiles during the winter months, ATVs during warmer months and hunting season, and watercraft during a January fishing season and during the warmer months). During these study periods, there was a very strong similarity in the patterns of use among the three vehicle types. One fourth of all owners used their vehicles in at least two weeks of their 4-week study periods. Across all registered owners, the average number of vehicle use was 0.8 to 0.9. See Table 6 below.

**Table 6: Frequency of Recreational Vehicle Use**

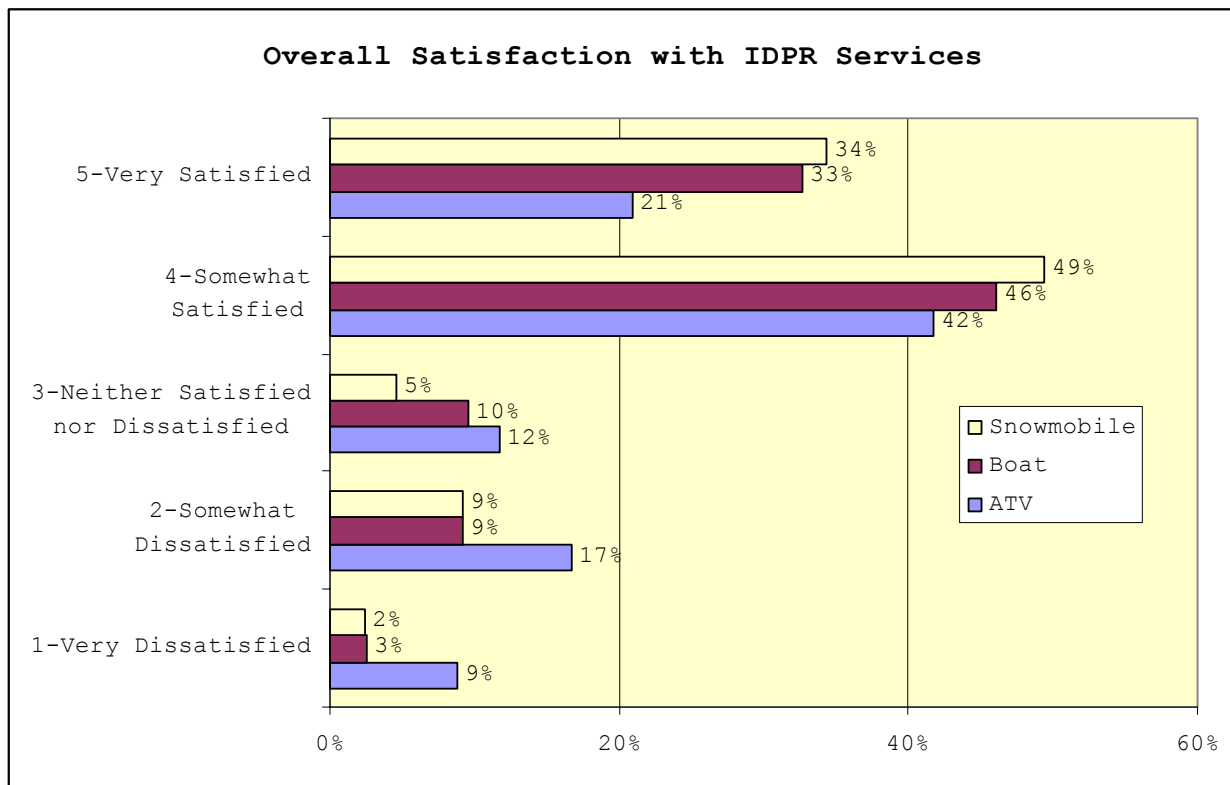
	Snowmobile	ATV	Watercraft
Mean number of weeks during 4-week study period – all owners	0.9	0.8	0.8
Mean number of weeks during 4-week study period – users only	2.1	2.1	2.3
Percent of all owners who use vehicles 2 or more weeks during 4-week period	25.3%	24.4%	24.6%

### Satisfaction with Services to Recreational Vehicle Users

Respondents in each of the three studies rated their overall satisfaction with Idaho Department of Parks and Recreation public services to recreational users in Idaho<sup>4</sup>. Satisfaction was reported on a five-point scale, with 5=Very Satisfied, 4=Somewhat Satisfied, 3=Neither Satisfied nor Dissatisfied, 2=Somewhat Dissatisfied, and 1=Very Dissatisfied.

Snowmobile and watercraft owners were equally satisfied with IDPR services (mean ratings of 4.04 and 3.97, respectively, on the 5-point satisfaction rating scale). ATV owners were significantly less satisfied with overall services<sup>5</sup> (mean rating of 3.49 on the 5-point rating scale). ATV owners are less likely to be satisfied and more likely to be dissatisfied with IDPR services (see Figure 1 below).

**Figure 1: Recreational Vehicle User Overall Satisfaction with IDPR Services**



<sup>4</sup> Snowmobile owners rated overall satisfaction with IDPR services to snowmobile users, ATV owners rated overall satisfaction with IDPR services to ATV users, and watercraft owners rated overall satisfaction with IDPR services to watercraft users.

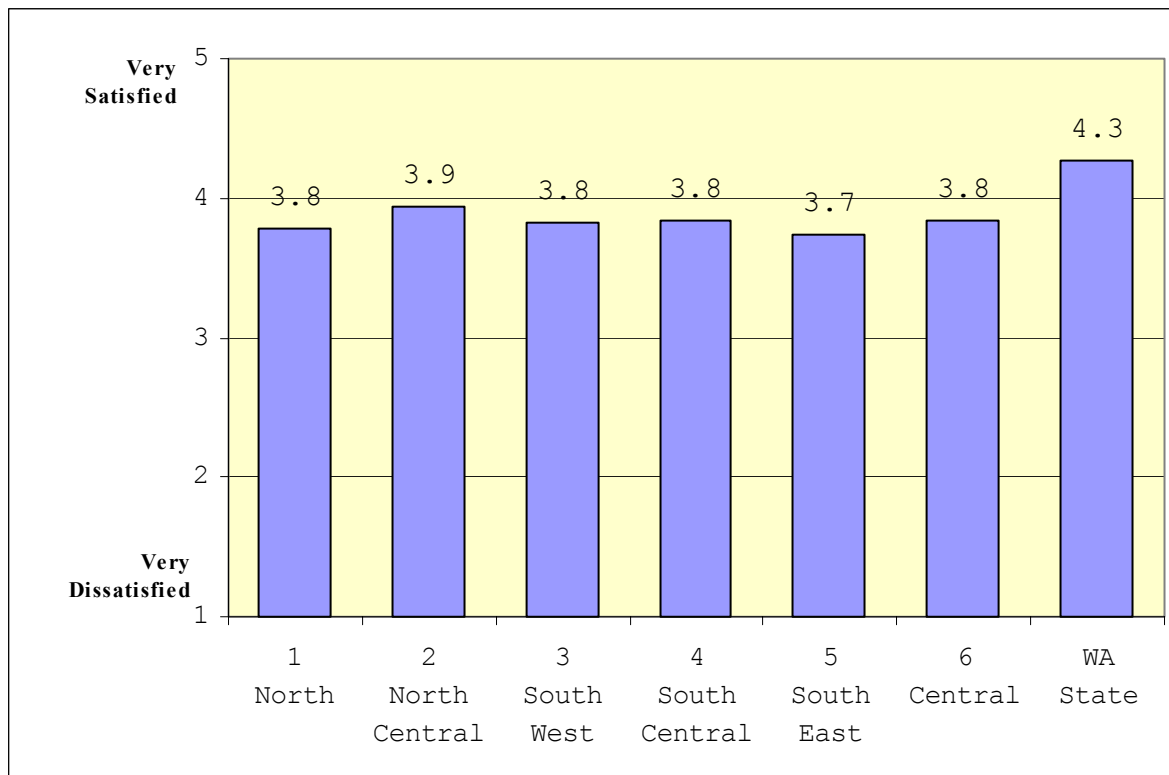
<sup>5</sup>  $F(2, 1970)=44.19, p<.001$ . Snowmobile  $n=455$ ; watercraft  $n=886$ ; ATV  $n=579$ .

User overall satisfaction with IDPR services was examined with respect to a number of respondent characteristics, including age, support for minimum recreational vehicle operating age, number of recreational vehicles owned, gender, and frequency of recreational vehicle use. None of these characteristics, either alone or in combination, provided further information about those more or less satisfied with user services<sup>6</sup>. Satisfaction did vary significantly by IDPR Planning District (see following section, *Satisfaction with Services by IDPR Planning District*).

### ***Satisfaction with Services by IDPR Planning District***

Recreational vehicle owners' overall satisfaction with IDPR services to users varied significantly by IDPR planning district<sup>7</sup>. Satisfaction was highest among users in the North Central Planning District and among Washington State residents who own watercraft registered in the state of Idaho.

**Figure 2: Overall Satisfaction with Services by Planning District**



<sup>6</sup> The most satisfied respondents were Washington State residents who own watercraft registered in the state of Idaho. Each of the tests of overall satisfaction with respect to respondent characteristics was conducted with and without the Washington State residents.

<sup>7</sup>  $F(6,1913)=3.127, p=.005$ .

### ***Minimum Age Requirements for Recreational Vehicle Operators***

Survey participants in the three studies indicated whether there should be a minimum age required to operate a recreational vehicle, and if so, what that age should be<sup>8</sup>. Snowmobile owners were the least likely to support a minimum age, while watercraft owners were the most likely to support a minimum age. Similarly, snowmobile owners who favored a minimum age supported the youngest minimum age (mean age 13.1 years), while watercraft owners supported the highest minimum age (mean age 15.4 years)<sup>9</sup>. See Tables 7 and 8.

**Table 7: Support for Minimum Age Requirements for Operators**

	Snowmobile	ATV	Watercraft
Percent who support a minimum age requirement	57.3%	72.7%	92.4%
Total number of respondents	464	587	902

**Table 8: Support for Minimum Age Requirements for Operators**

Appropriate Minimum Age	Snowmobile	ATV	Watercraft
7 years and below	2.3%	2.0%	0.0%
8-13 years	47.7%	32.4%	11.6%
14-17 years	45.4%	57.7%	75.1%
18-20 years	4.6%	7.1%	11.9%
21 years and over	0.0%	0.7%	1.4%

<sup>8</sup> Snowmobile owners responded to questions about a minimum age for the operation of a snowmobile, ATV owners responded with respect to an ATV minimum age, and watercraft owners responded with respect to a motorized watercraft minimum age.

<sup>9</sup>  $F(2,1476) = 96.49, p < .001$ .

### ***Household Recreational Vehicles***

The three studies revealed a substantial overlap in the ownership of recreational vehicles in Idaho. For example, the average snowmobile owner reported 2.8 snowmobiles in their household, and also 3.0 other recreational vehicles (2.4 ATVs and 0.6 motorized watercraft). See Table 9.

**Table 9: Mean Number of Recreational Vehicles in Household**

	Snowmobile Owners	ATV Owners	Watercraft Owners
Number of Snowmobiles for Recreation	2.8	0.6	0.4
Number of ATVs for Recreation	2.4	2.5	0.9
Number of Watercraft for Recreation	0.6	0.6	1.5
Total by owner type	5.8	3.7	2.7

Only 15.7% of snowmobile registrants report having no other types of recreational vehicles in the household. As seen in Table 10 below, 75.5% (40.3% + 35.2%) of snowmobile owners have household ATV's, and 44.1% (8.9% + 35.2%) have household watercraft.

Motorized watercraft owners are the least likely to report other types of recreational vehicles. Only 15.6% of watercraft owners have household snowmobiles.

ATV and watercraft owners show similar rates of cross ownership. Forty-three percent of ATV owners have household watercraft, and forty-one percent of watercraft owners have household ATVs.

**Table 10: Types of Recreational Vehicles in Household**

Recreational vehicles found in household	Snowmobile Owners	ATV Owners	Watercraft Owners
Snowmobile	15.7%	--	--
Snowmobile, ATV	40.3%	15.7%	--
Snowmobile, Watercraft	8.9%	--	5.1%
Snowmobile, ATV, Watercraft	35.2%	10.5%	10.5%
ATV	--	41.2%	--
ATV, Watercraft	--	32.6%	30.9%
Watercraft	--	--	53.5%

***Media Preferences for Communications from IDPR***

Survey respondents identified the best method for informing them of snowmobile trailhead, ATV trail, or boat launch conditions. For each of the three vehicle owner groups, a plurality nominated the Internet as the best means of communication. The newspaper was the second most nominated medium among snowmobile and watercraft owners, while a newsletter was the second most nominated by ATV owners. See Table 11.

**Table 11: Preferred Communications Medium**

Recreational vehicles found in household	Snowmobile Owners	ATV Owners	Watercraft Owners
Internet	31.4%	29.4%	30.1%
Newspaper	17.9%	16.0%	22.1%
Newsletter	5.1%	22.7%	11.8%
Signs at Trailheads/Launch Areas	8.8%	12.9%	14.8%
Toll-Free, 800 Number	14.6%	6.0%	8.8%
Other	5.8%	7.9%	6.5%
TV	9.3%	2.6%	4.1%
Radio	7.1%	2.6%	1.9%



### ***Recommendations for Further Recreational Vehicle Use Research***

We conducted three research studies of recreational vehicle use in a time period spanning November, 2002 through November, 2003. These studies were:

- *Idaho Recreational Snowmobile Use and Fuel Consumption in the 2003 Season*
- *Idaho Recreational ATV Use and Fuel Consumption in the 2003 Season*
- *Idaho Recreational Watercraft Use and Fuel Consumption in the 2003 Season.*

Overall, these research efforts were highly successful. These studies enjoyed a higher cooperation rate among the registrants who were randomly selected to participate than some statewide recreational vehicle use surveys [see prior section, “Study Response Rates”]. In part, this high cooperation was attributable to the modified telephone-plus-one methodology used to conduct the studies. The high participation boosts confidence in the reliability and generalizability of the study findings.

As a follow-on to this project, and to bolster long-term usefulness of the findings, the IDPR may wish to conduct future recreational vehicle use studies. Recreational use varies from year to year. Recreational activities are influenced by a variety of variable factors, e.g., snow depths, seasonal climate conditions, wildlife abundance, general economic conditions, etc. As a result, multi-year assessments of recreational vehicle use can provide better historical use data and better assist in the development of forecasts by recreational service planners than a single year study.

A few considerations for continuing recreational vehicle use studies:

- The IDPR could choose to re-survey one user group each year, e.g., snowmobilers in 2005, boaters in 2006, and so on. They would allow the department to track changes in user satisfaction with services. Repeated studies would also allow the department to develop more stable estimates of use for activities that are highly condition-dependent.
- Further studies can capture the extent of off-road use by light trucks and SUVs.
- Future studies can assess recreational vehicle use by out-of-state visitors.
- Future studies may probe for greater detail and depth about the nature and causes of customer satisfaction and expectations.